



# AOPA High School Aviation Initiative

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<https://youcanfly.aopa.org/high-school>

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# Why Aviation/Aerospace?



## North American Workforce Needs 2016-2035



**Pilots**  
**112,000**



**Technicians**  
**127,000**

Source: 2016 Boeing Pilot and Technician Outlook

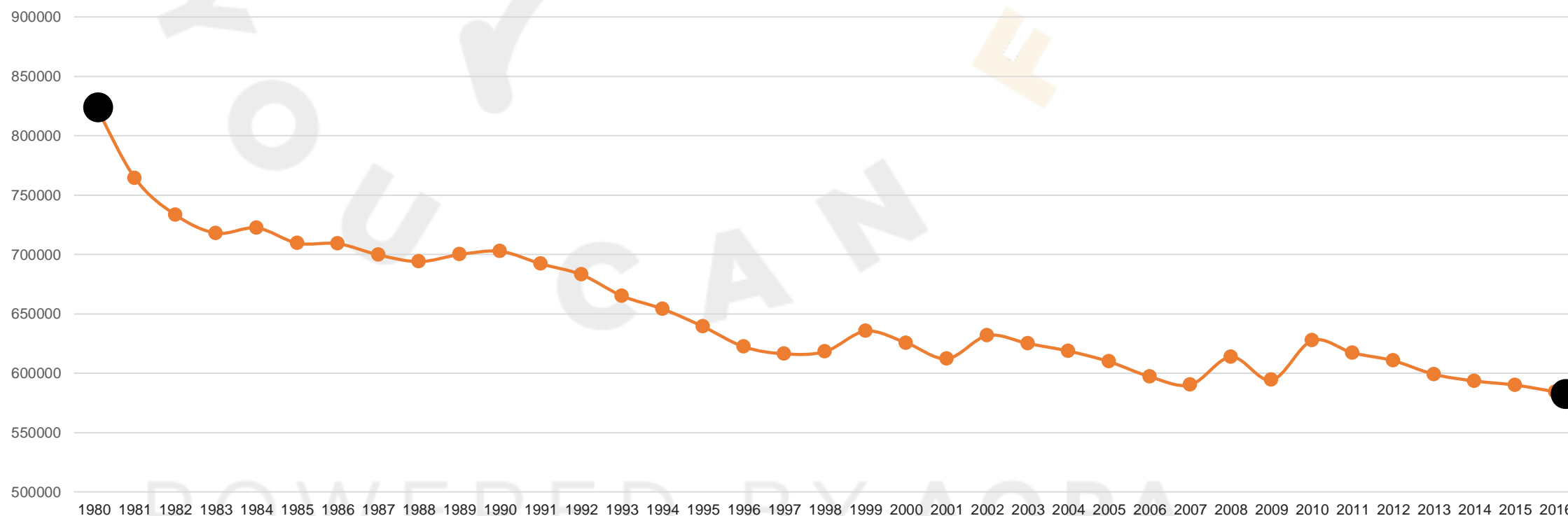


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# Active Certificated Airplane Pilots, US

1980 827,071 Active Pilots

2016 593,499 Active Pilots

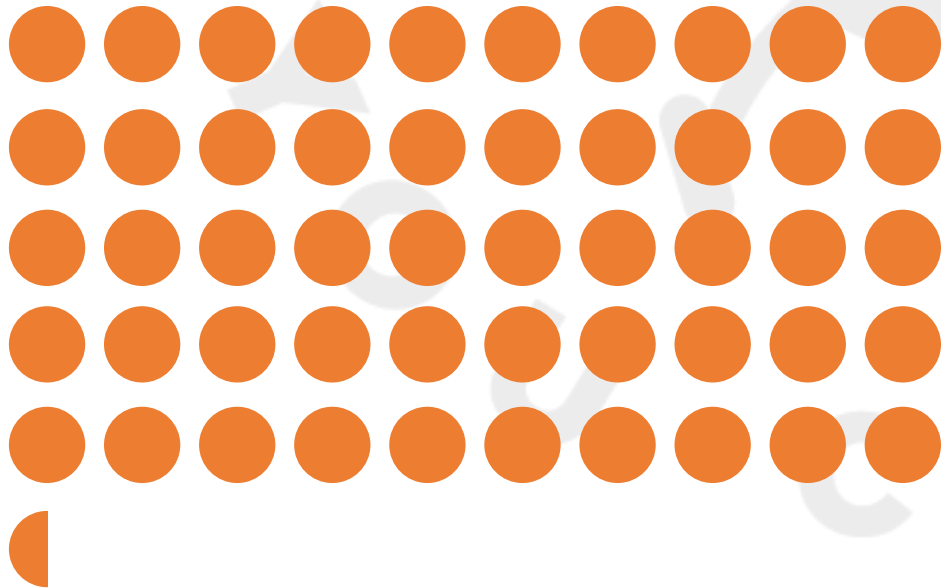


# FAA Private Pilot Certificates Issued (Building Blocks for Commercial Aviation)

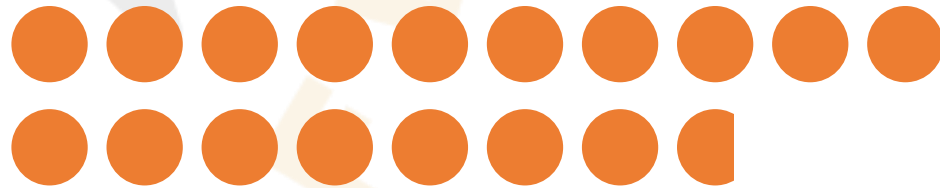


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1980 50,458 Issued



2015 17,795 Issued



65%



● = 1000 CERTIFICATES

# 3 Main Areas of AOPA's High School Aviation Initiative

- Aviation STEM Curriculum Development
- Annual High School Aviation STEM Symposium
- High School Flight Training Scholarship Program

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# AOPA High School Aviation STEM Curriculum

- Three career and technical education pathways-pilot, UAS, aerospace engineering
- Four year program
- Industry credential in each pathway

Pilot	→	FAA Private Pilot written test
UAS	→	FAA Part 107 Commercial Drone Pilot written test
Aerospace Engineering	→	3-D modeling software test

- Courses are being externally evaluated
- Courses can be adopted individually by high schools
- **Thanks to generous donations to the AOPA Foundation, this curriculum is free to high schools.**

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# AOPA Aviation STEM Curriculum Outline

## 9<sup>th</sup> Grade

## 10<sup>th</sup> Grade

## 11<sup>th</sup> Grade

## 12<sup>th</sup> Grade

	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
Pilot	Principles of Aviation & Aerospace	Exploring Aviation & Aerospace	Introduction to Flight	Aircraft Systems	Private Pilot Fundamentals I	Private Pilot Fundamentals II	Aviation Safety	Pilot Capstone
Unmanned Aircraft Systems	Principles of Aviation & Aerospace	Exploring Aviation & Aerospace	Introduction to Flight	Aircraft Systems	UAS Operations I	UAS Operations II	UAS Design & Applications	UAS Capstone
Aerospace Engineering	Principles of Aviation & Aerospace	Exploring Aviation & Aerospace	Aerodynamics for Engineers	Principles of Engineering for Aerospace Applications	Aerospace Materials	Aerospace Engineering Drawing	Advanced Aerospace Design	Aerospace Engineering Capstone

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# AOPA's High School Aviation Curriculum Development Timeline

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
9 <sup>th</sup>	Develop Courses	Field Test	Implement			
10 <sup>th</sup>		Develop Courses	Field Test	Implement		
11 <sup>th</sup>			Develop Courses	Field Test	Implement	
12 <sup>th</sup>				Develop Courses	Field Test	Implement



# 3<sup>rd</sup> Annual AOPA High School Aviation STEM Symposium

- November 6-7, 2017
- C.R. Smith Museum, Fort Worth, TX
- For high school educators and administrators
- Keynotes, breakout sessions, panels
- American Airlines Headquarters tours
- Only national event specifically focused on high school aviation education
- Learning, networking, and collaborating



<https://youcanfly.aopa.org/high-school/symposium>



# High School Flight Training Scholarship Program



## 2016 program

- ✓ 21 winners
- ✓ 4 private pilots
- ✓ 11 soloed

## 2017 program

- ✓ 509 completed applications
- ✓ 23 winners announced June 23 (12 boys, 11 girls)
- ✓ 1 private pilot

- Current high school students, ages 15 to 18 yrs. old
- \$5,000 towards initial flight training expenses
- Next cycle opens in January 2018